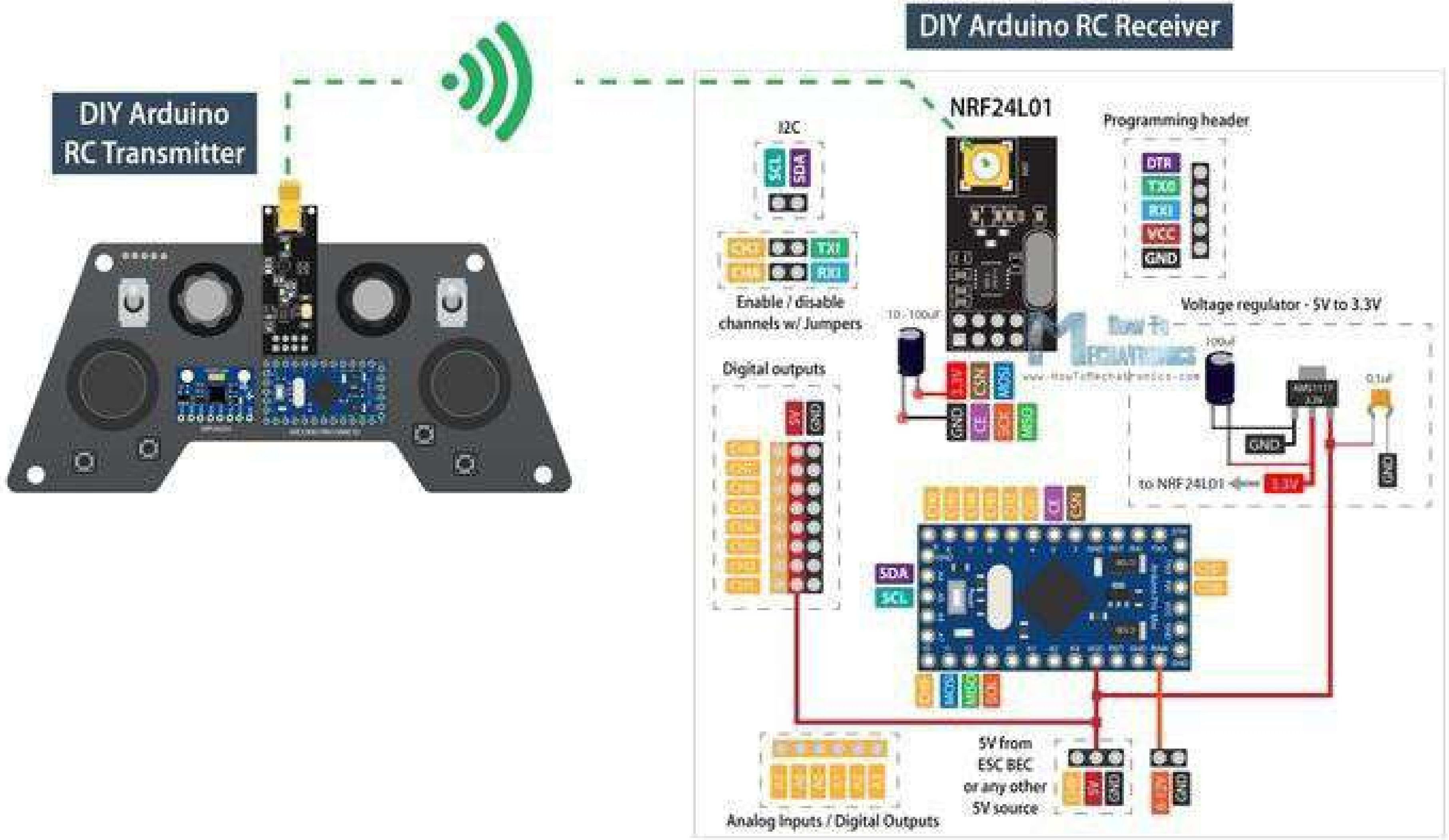
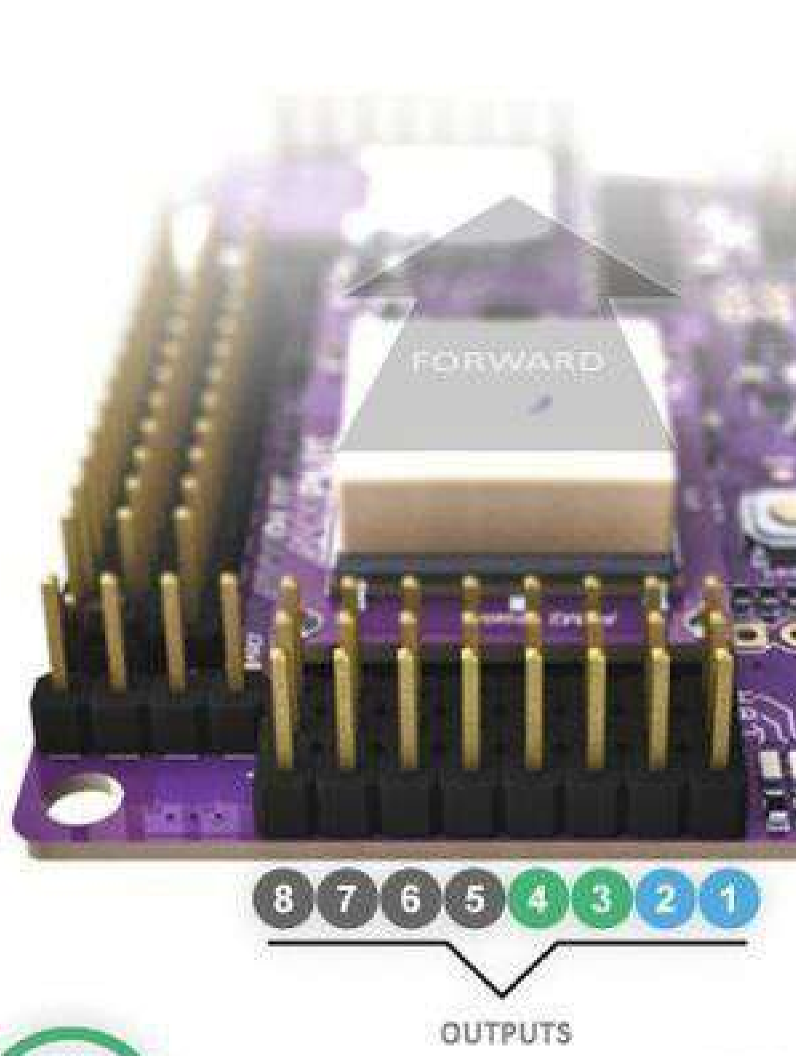
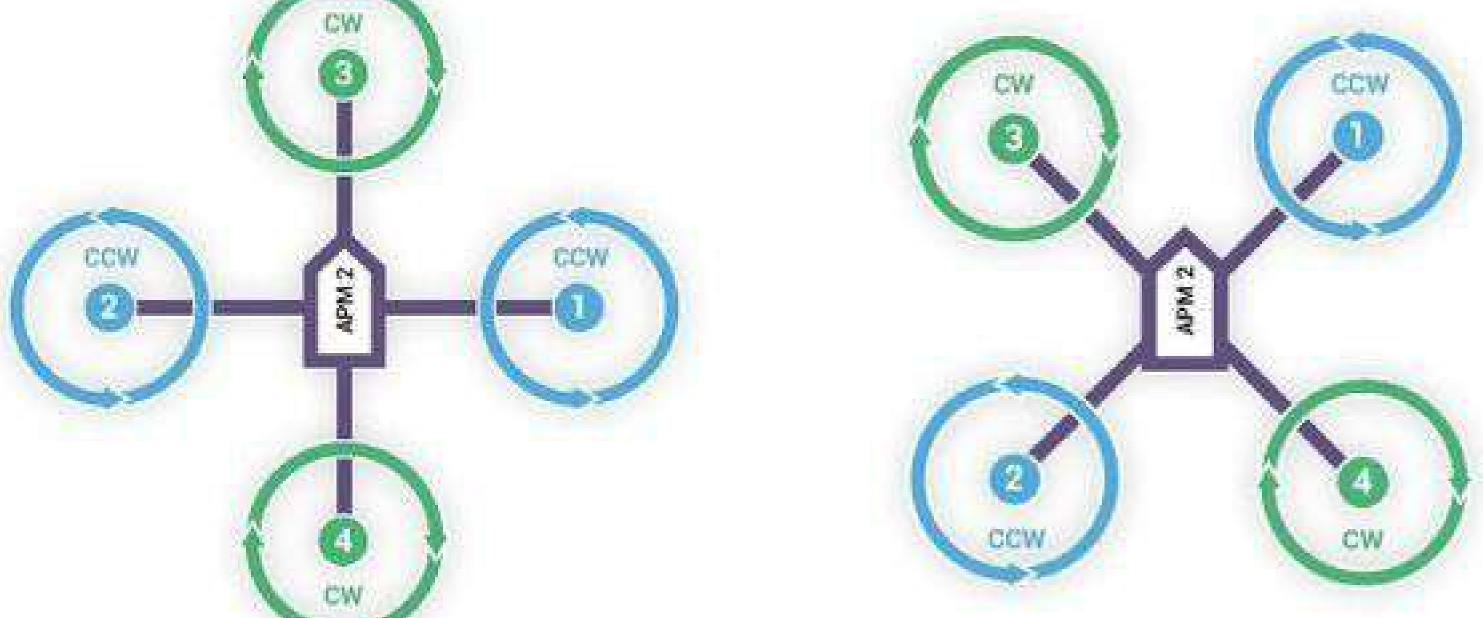

DIY Arduino RC Receiver
DIY Arduino
RC Transmitter
NRF24L01
I2C
SCL
SDA
Programming header
DTR
TXO
RXI
VCC
GND
TXI
RXI
Enable / disable
channels w/ Jumpers
10 - 100uF
Voltage regulator - 5V to 3.3V
100uF
0.1uF
Digital outputs
5V
GND
3.3V
CSN
MOSI
CE
SCK
MISO
to NRF24L01
SDA
SCL
5V from
ESC BEC
or any other
5V source
Analog Inputs / Digital Outputs



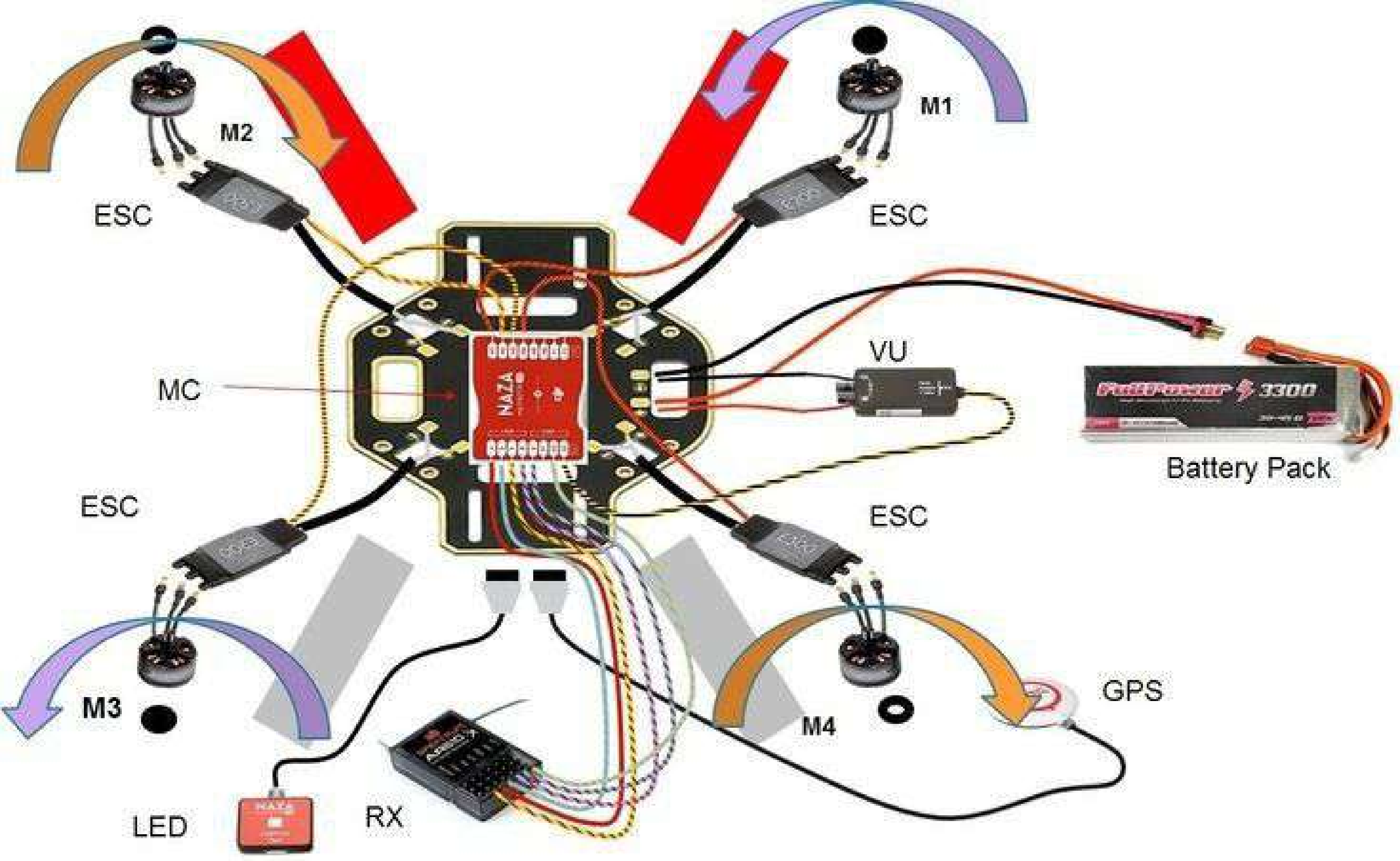


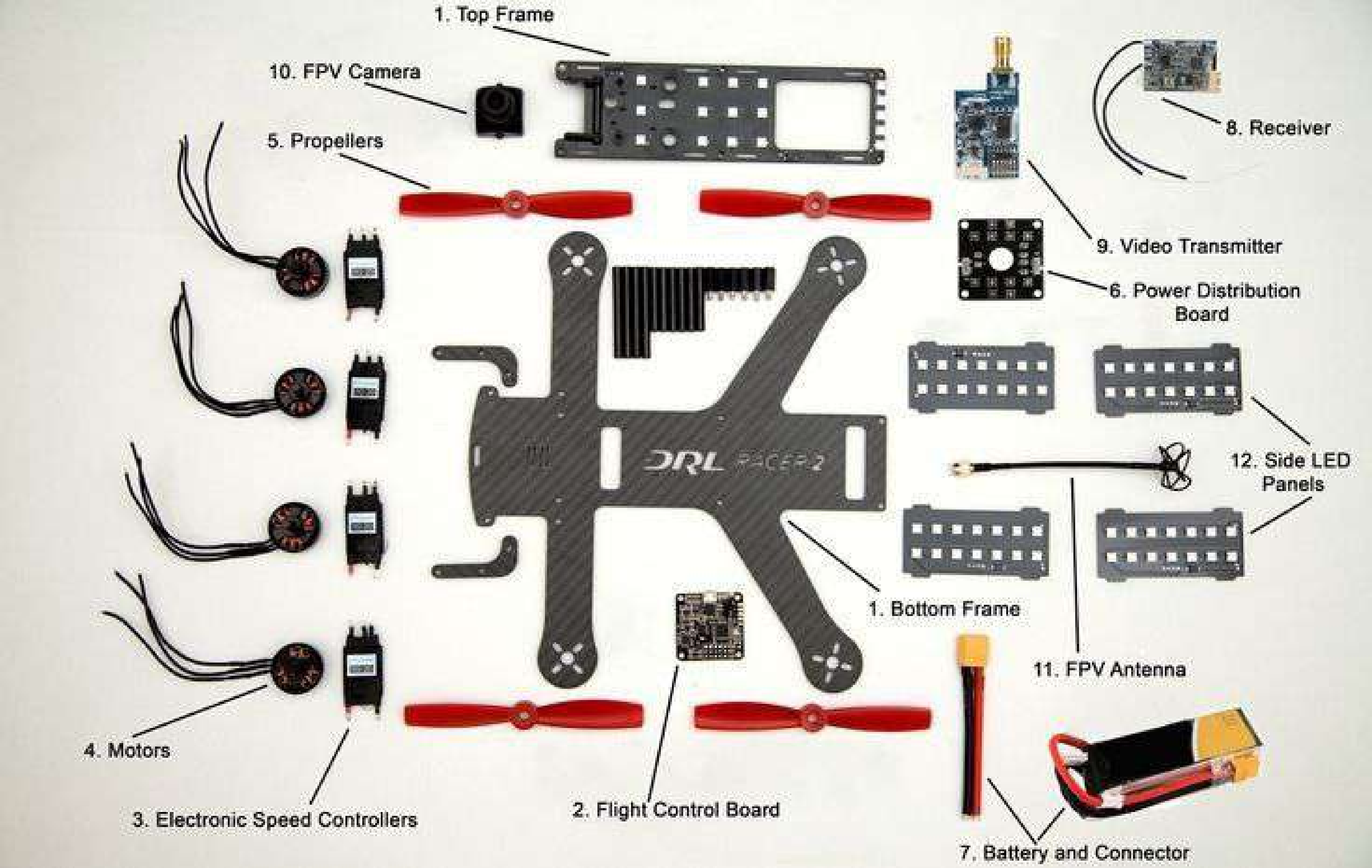
QUAD +

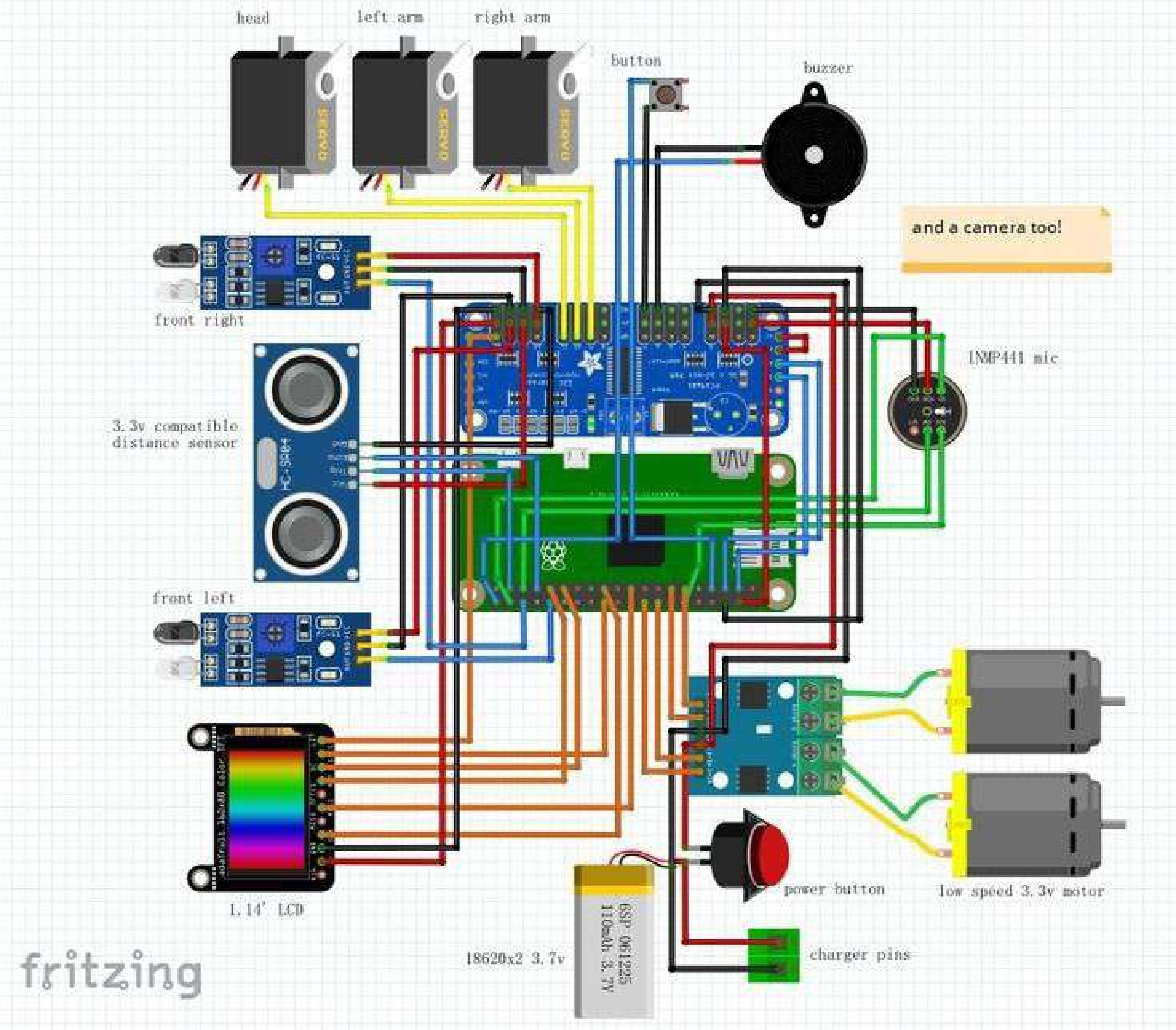
QUAD X

CLOCKWISE ROTATION
USE PUSHER PROPELLER

COUNTER-CLOCKWISE ROTATION
USE NORMAL PROPELLER


M2
M1
ESC
ESC
MC
VU
Battery Pack
ESC
ESC
M3
M4
GPS
LED
RX

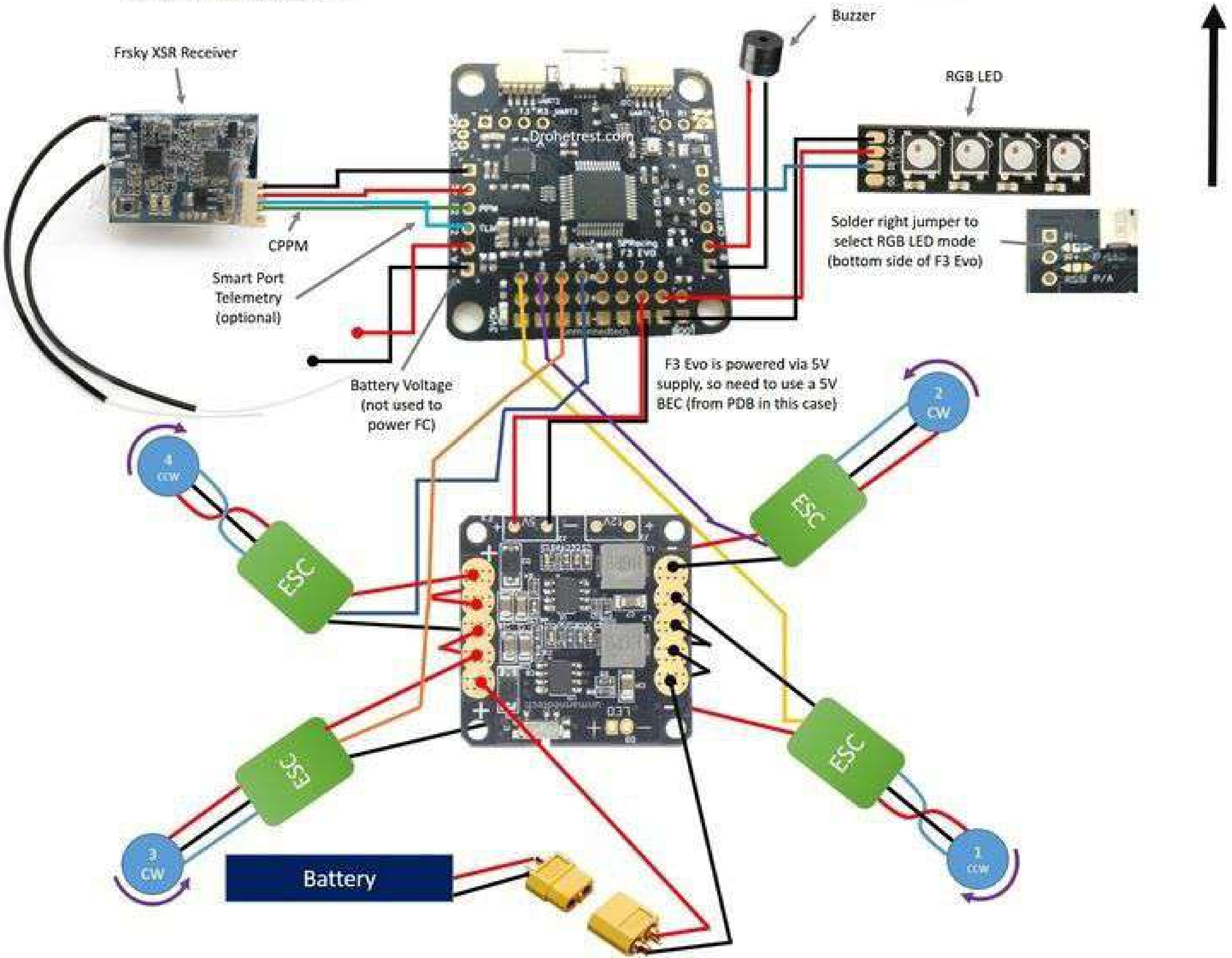

1. Top Frame
10. FPV Camera
5. Propellers
8. Receiver
9. Video Transmitter
6. Power Distribution Board
12. Side LED Panels
1. Bottom Frame
11. FPV Antenna
4. Motors
3. Electronic Speed Controllers
2. Flight Control Board
7. Battery and Connector



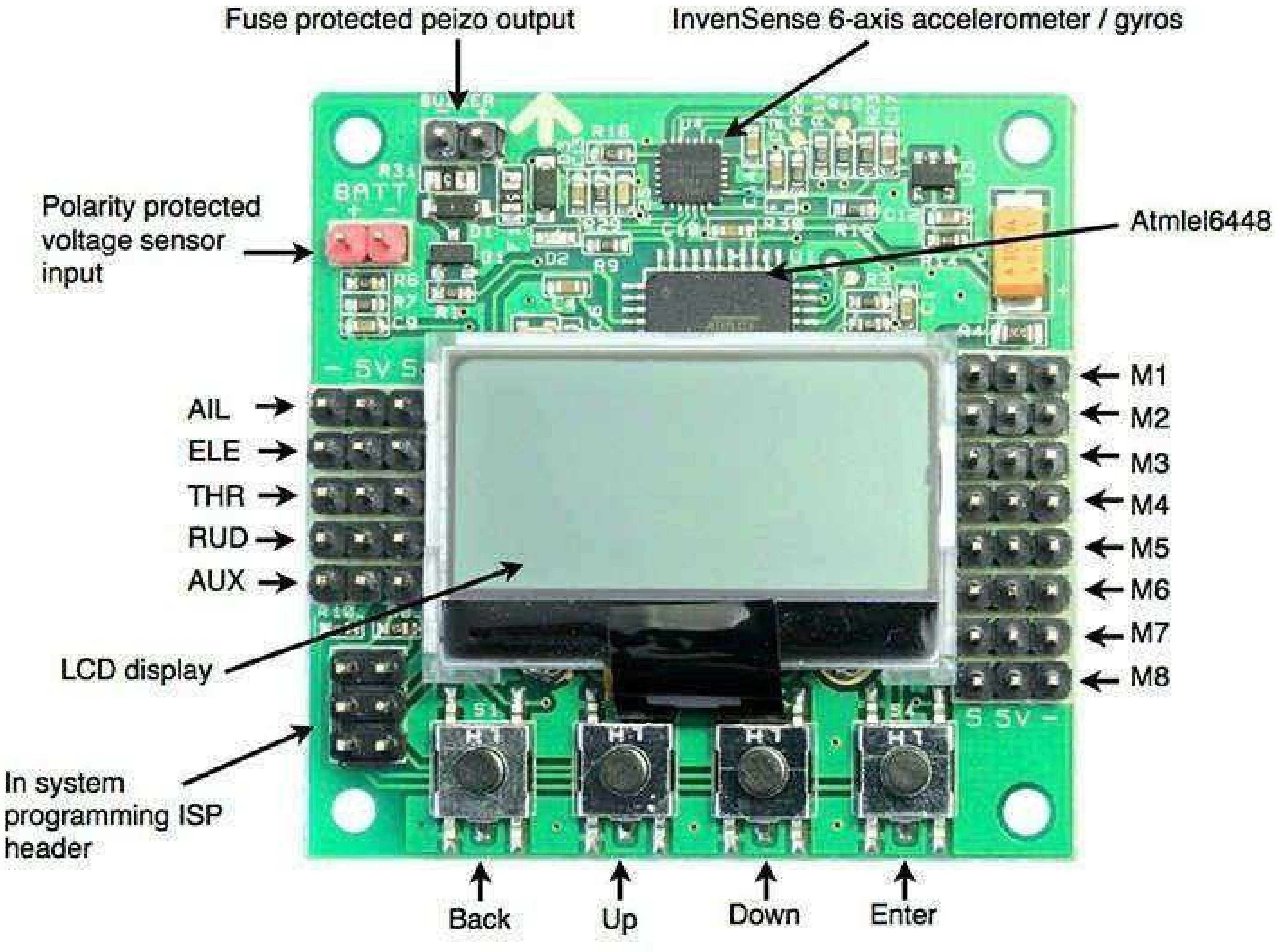
head
left arm
right arm
button
buzzer
and a camera too!
front right
INMP441 mic
3.3v compatible
distance sensor
front left
1.14' LCD
power button
low speed 3.3v motor
18620x2 3.7v
charger pins
fritzing

SP F3 EVO Connection Diagram

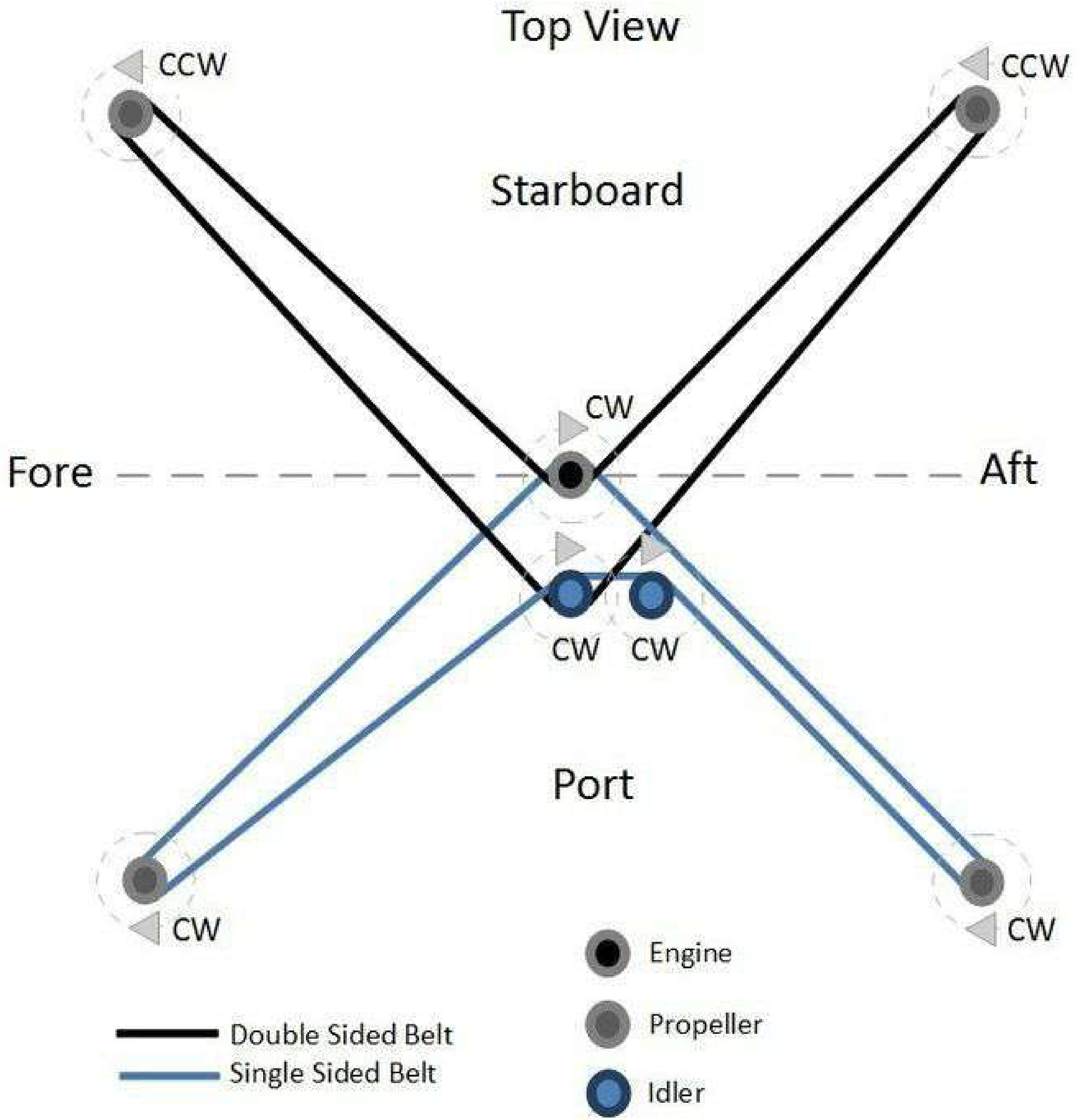
DroneTrest.com



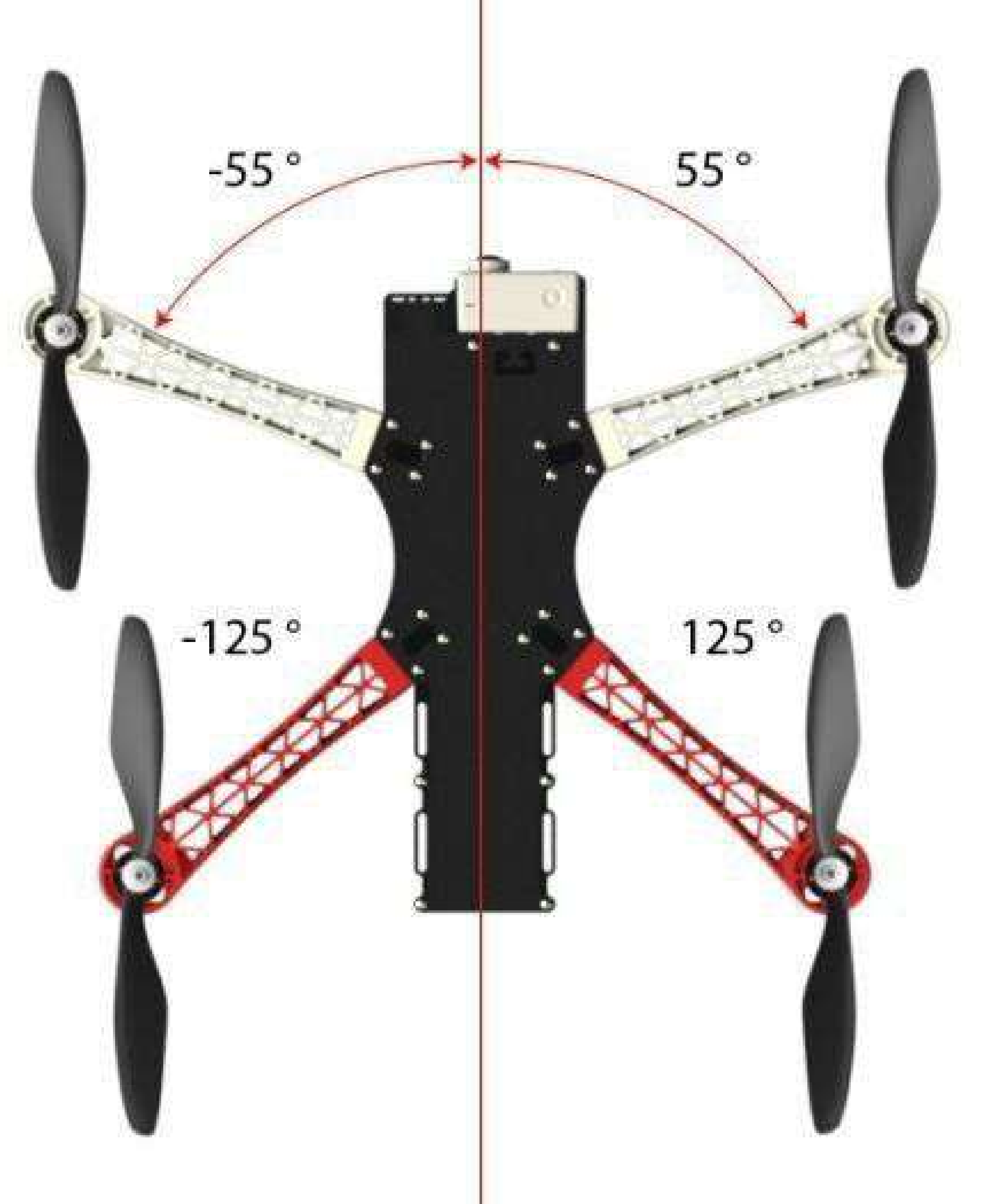
WIRELESS
WWW.ADEEPT.COM
Mini USB Cable
USB Cable
PDF
Document
Adeept Nano R3 Board
18650x2 Battery Holder
Adeept Remote Control Shield
NRF24L01
Small Screwdriver
NRF24L01
Adeept UNO R3 Board
Adeept Arm Drive Board
Small Servo X1
Plastic Gear Servo
Winding Pipe
Ribbon
Large Screwdriver
Servo Extension Cable
Metal Gear Servo
M3*30
M3*12
M3*6
M3*30
M2.5*8
M3*14
M4*40
M4
M4
M2
M3*8
M3*12
M3*18
M3*4
M2*10
M3*5
F624ZZ
M3*10
M2*14
M3
A01-2pcs
A19-1pcs
A23-4pcs
A03-2pcs
A02-4pcs
A20-6pcs
A21-3pcs
A22-6pcs
A05-5pcs
A06-2pcs
A07-10pcs
A28-6pcs
A04-2pcs
A30-1pcs
A10-5.3-12pcs
A31-1pcs
A10-3-16pcs
A10-4-12pcs
A08-S-1pcs
A08-M-1pcs
A08-L-1pcs
A9-1pcs
A24-1pcs
A25-1pcs
A11-8pcs
A12-2pcs
A13-2pcs
A14-1pcs
A29-1pcs
A15-1pcs
A17-1pcs
A16-1pcs
A18-1pcs
A27-1pcs
A26-3pcs

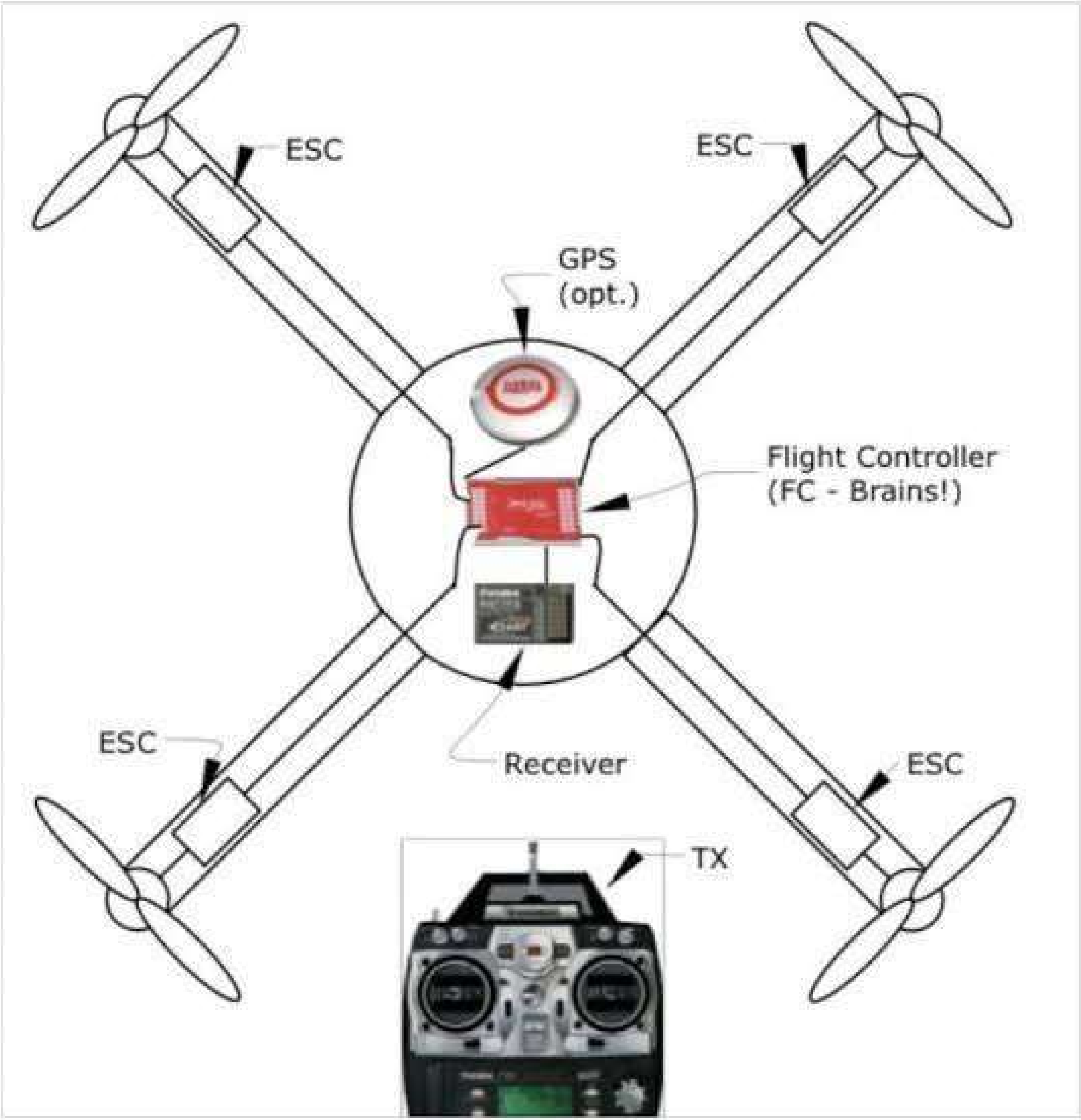


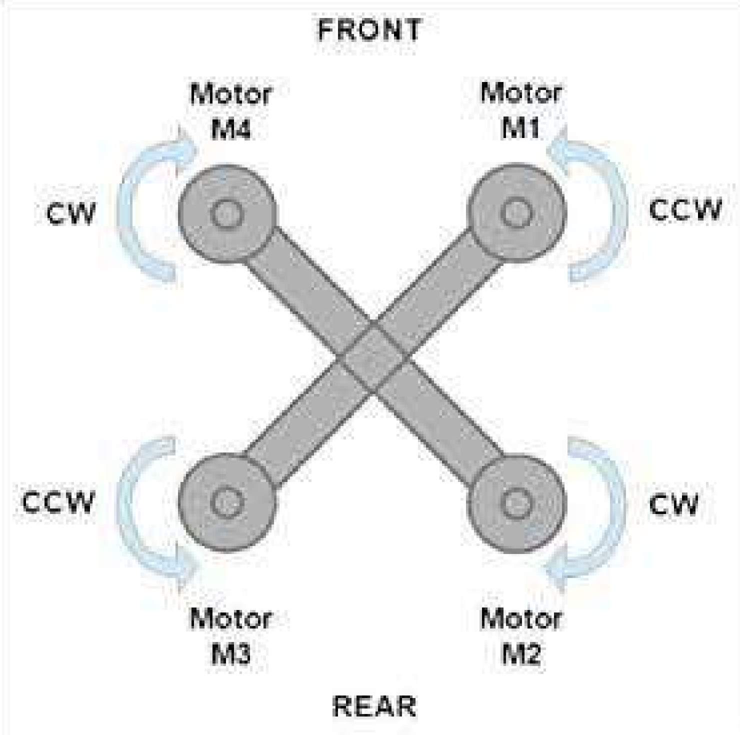
Fuse protected peizo output
InvenSense 6-axis accelerometer / gyros
Polarity protected voltage sensor input
Atmlel6448
AIL
ELE
THR
RUD
AUX
M1
M2
M3
M4
M5
M6
M7
M8
LCD display
In system programming ISP header
Back
Up
Down
Enter

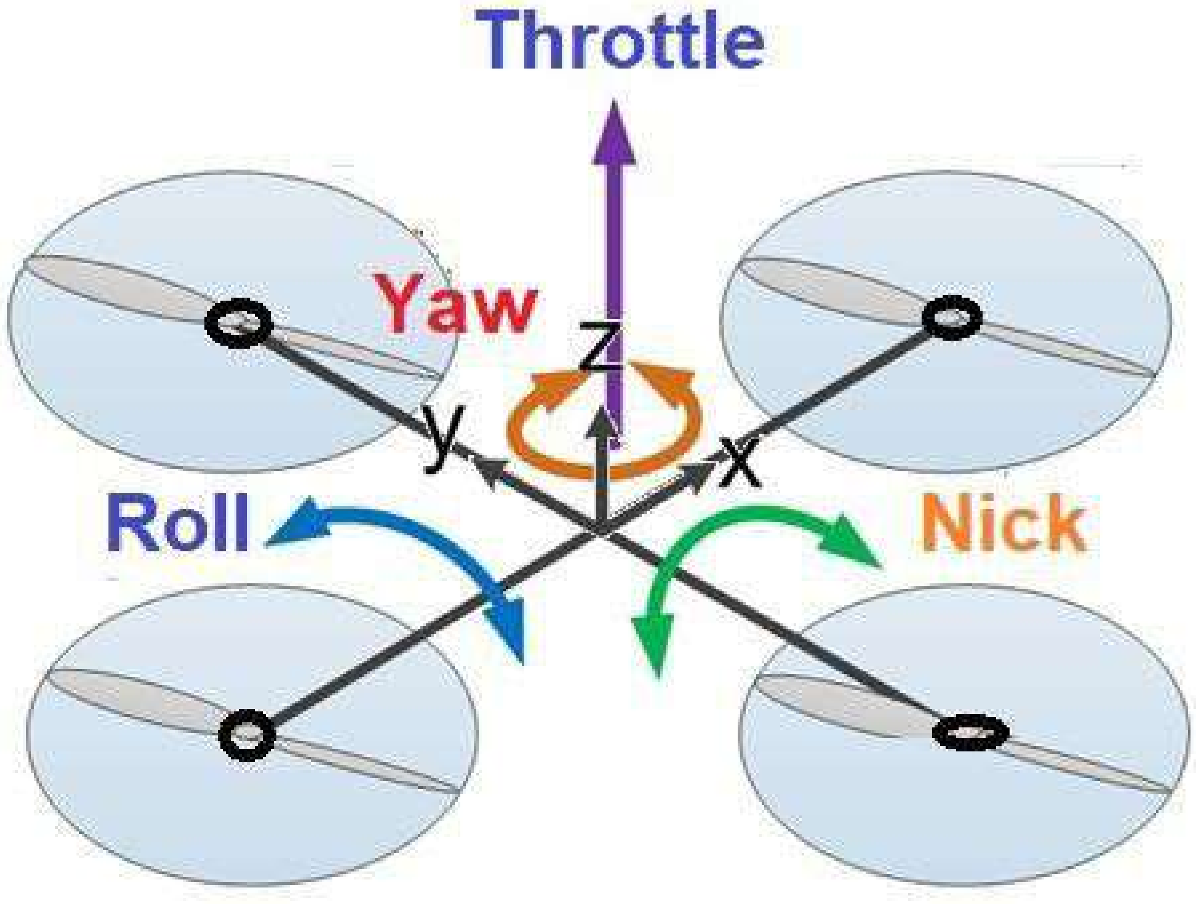


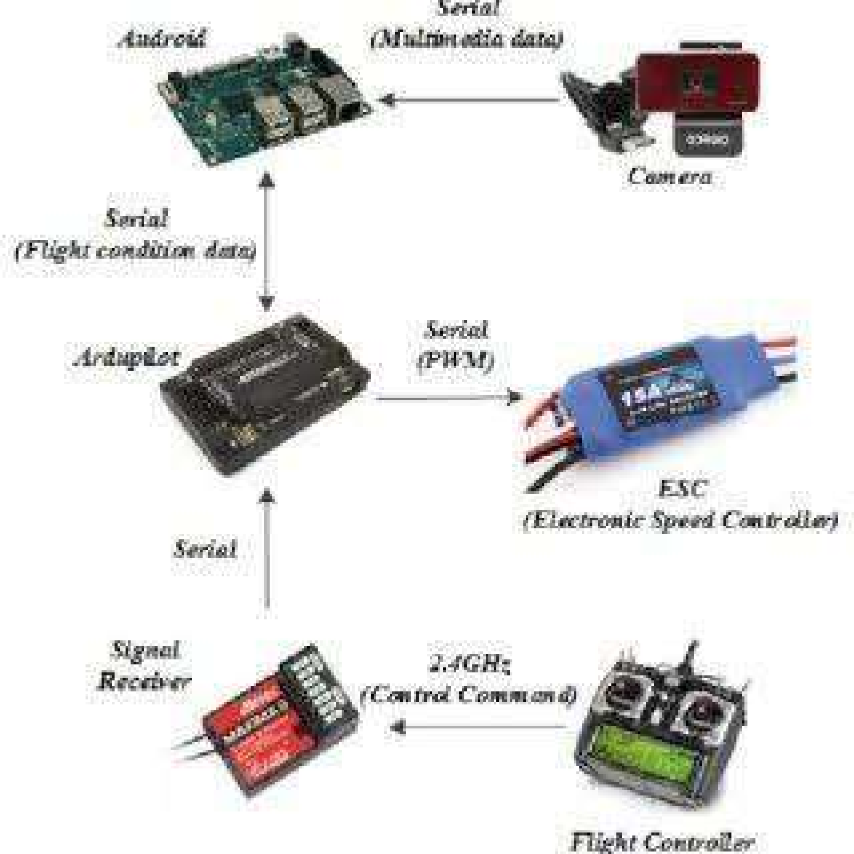
Top View
CCW
CCW
Starboard
CW
Fore
Aft
CW
CW
Port
CW
CW
Engine
Propeller
Idler
Double Sided Belt
Single Sided Belt


-55 °
55 °
-125 °
125 °

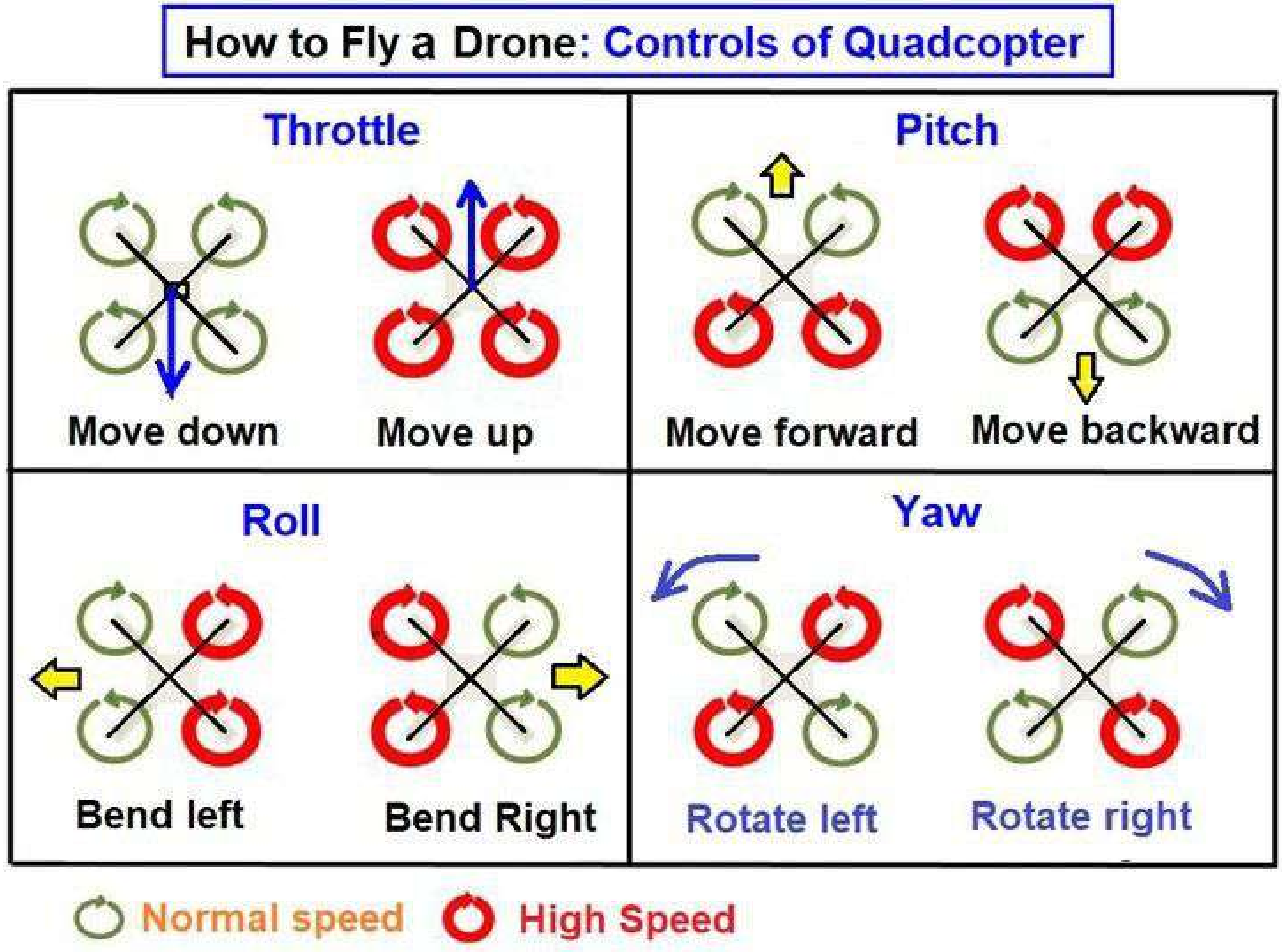

ESC
ESC
GPS
(opt.)
Flight Controller
(FC - Brains!)
ESC
Receiver
ESC
TX

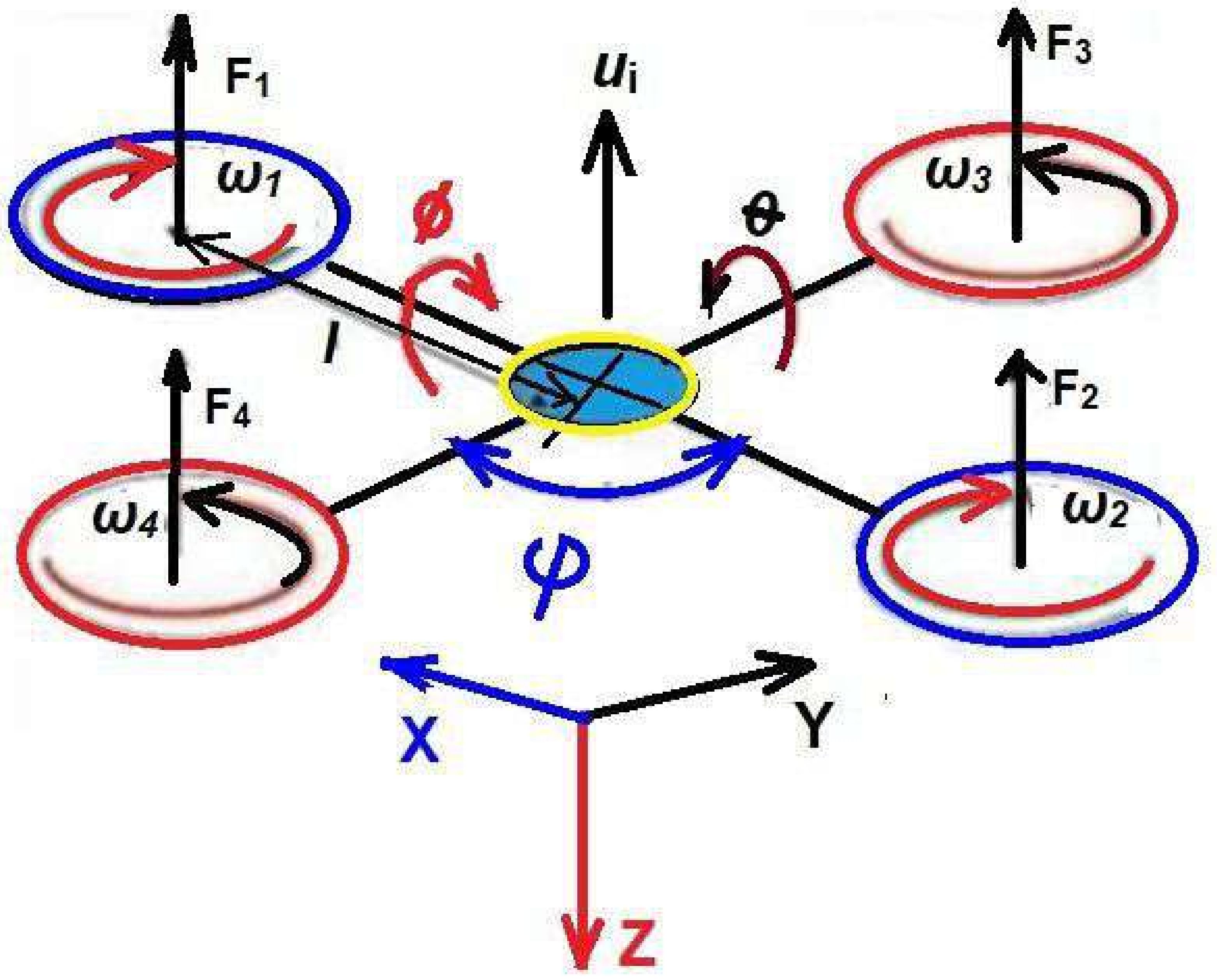

FRONT
Motor M4
Motor M1
CW
CCW
CCW
CW
Motor M3
Motor M2
REAR


Throttle
Yaw
z
y
x
Roll
Nick

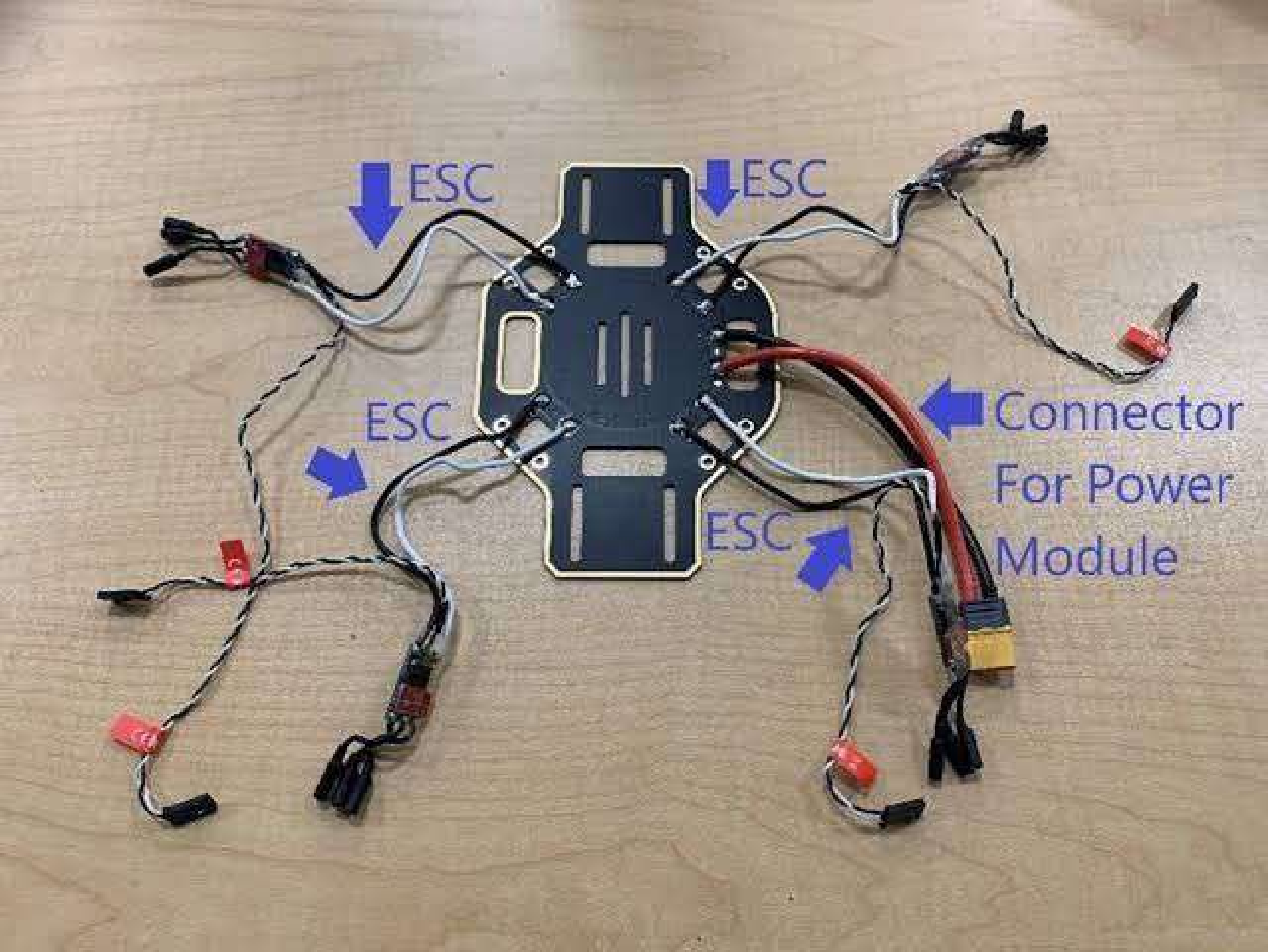


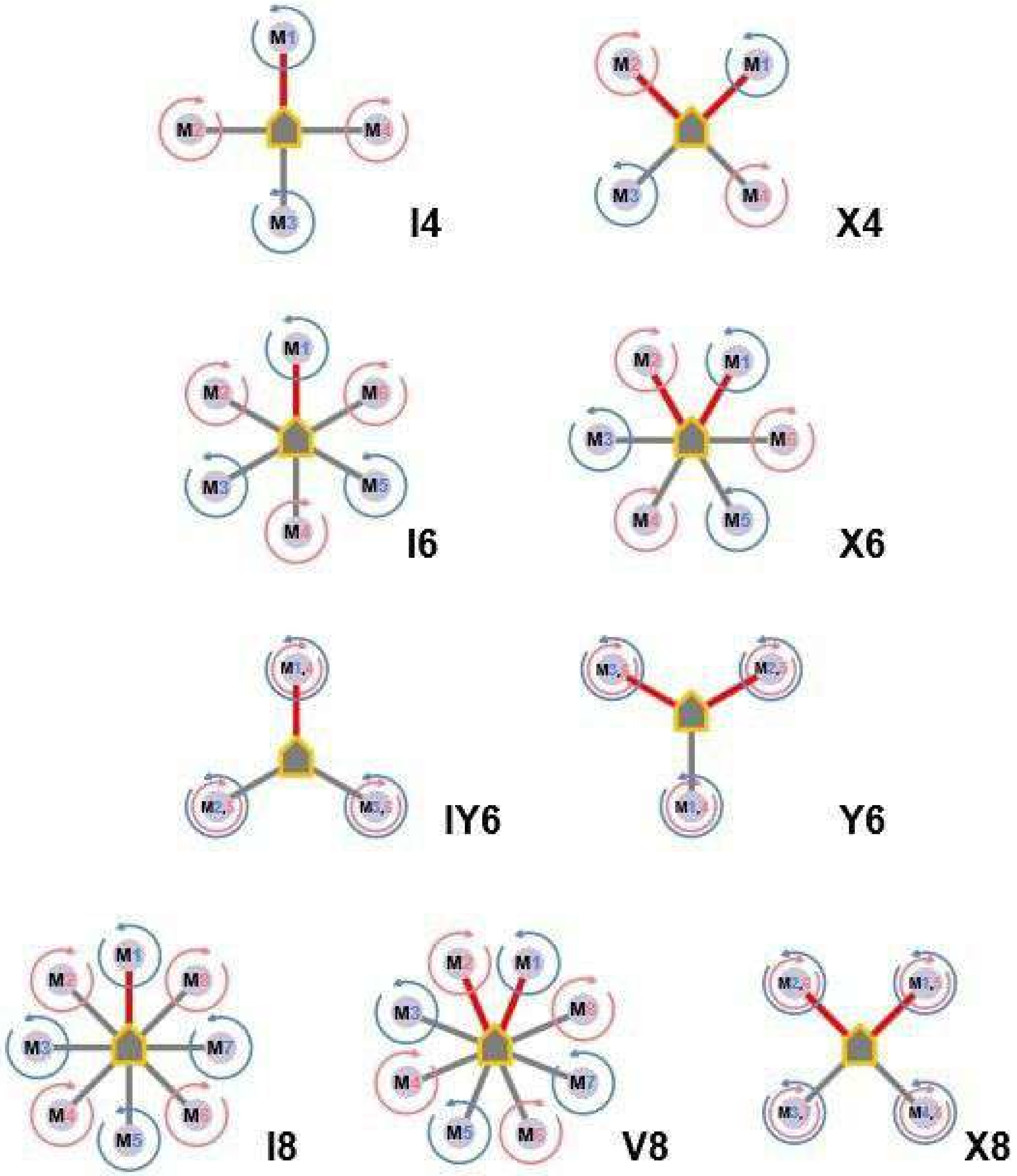
Serial
(Multimedia data)
Android
Camera
Serial
(Flight condition data)
Ardupilot
Serial
(PWM)
ESC
(Electronic Speed Controller)
Serial
Signal
Receiver
2.4GHz
(Control Command)
Flight Controller

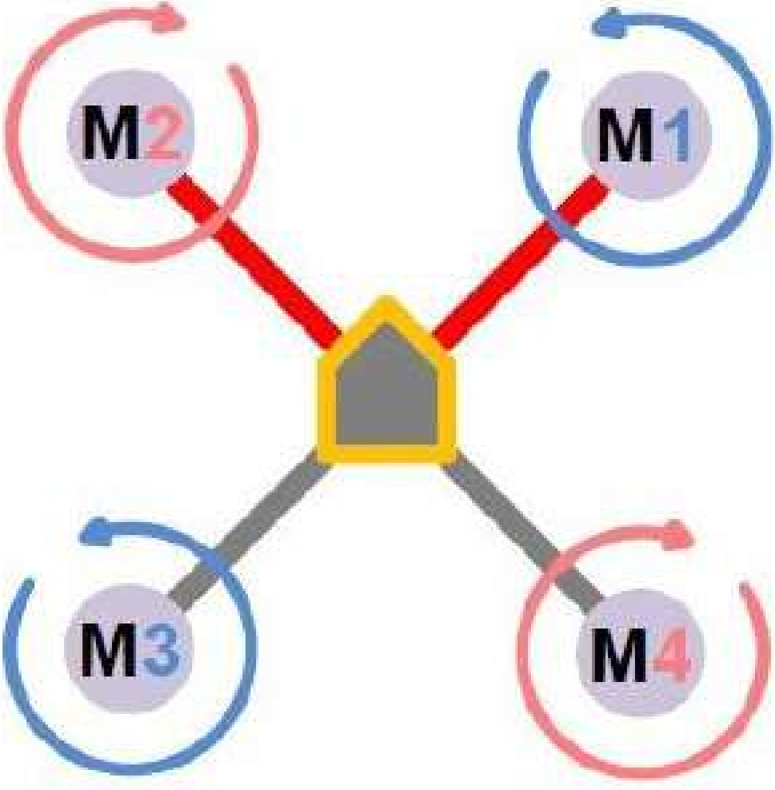

How to Fly a Drone: Controls of Quadcopter
Throttle
Move down
Move up
Pitch
Move forward
Move backward
Roll
Bend left
Bend Right
Yaw
Rotate left
Rotate right
Normal speed
High Speed



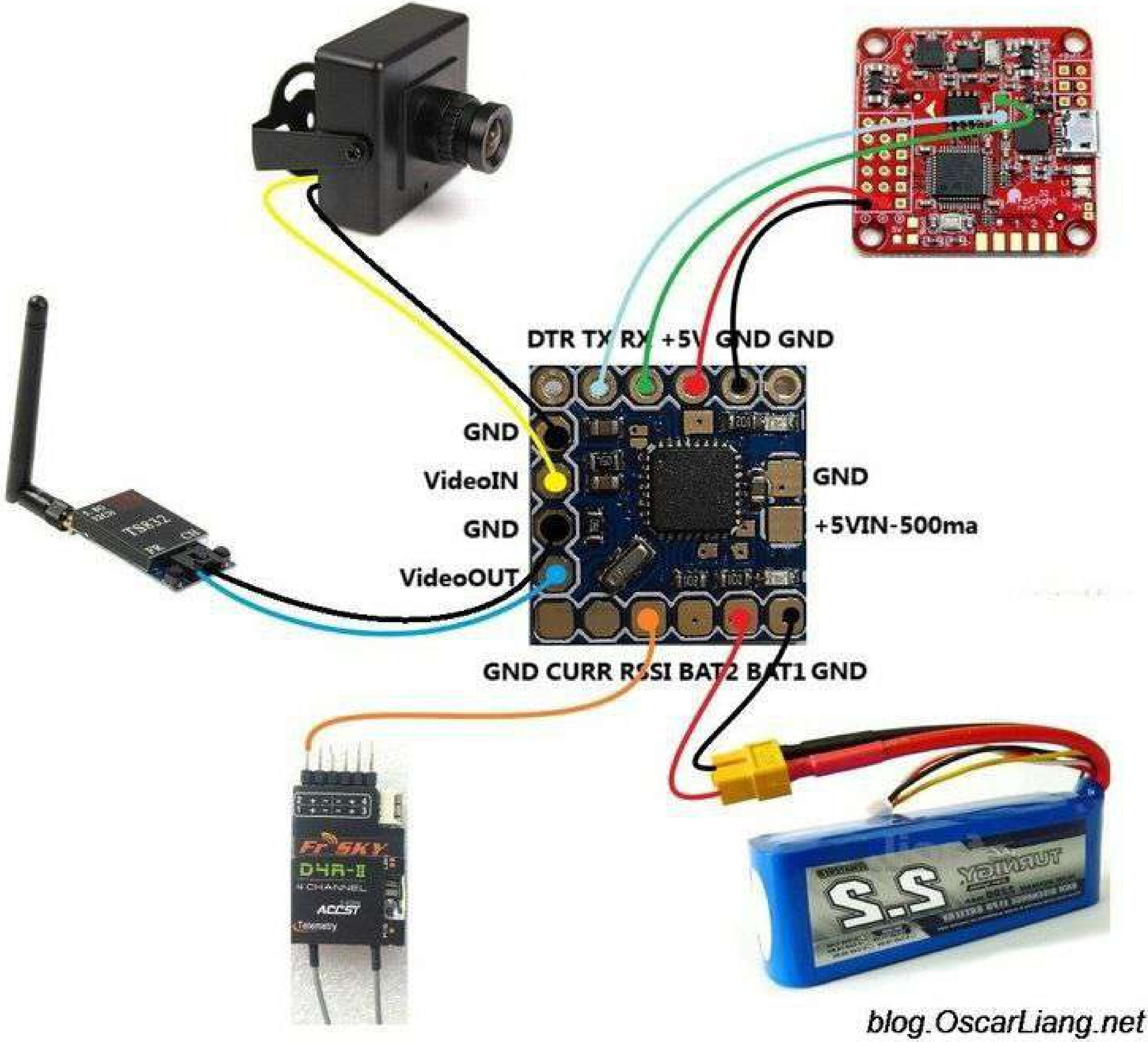
F1
ui
F3
ω1
ω3
ϕ
θ
l
F4
F2
ω4
ω2
φ
X
Y
Z

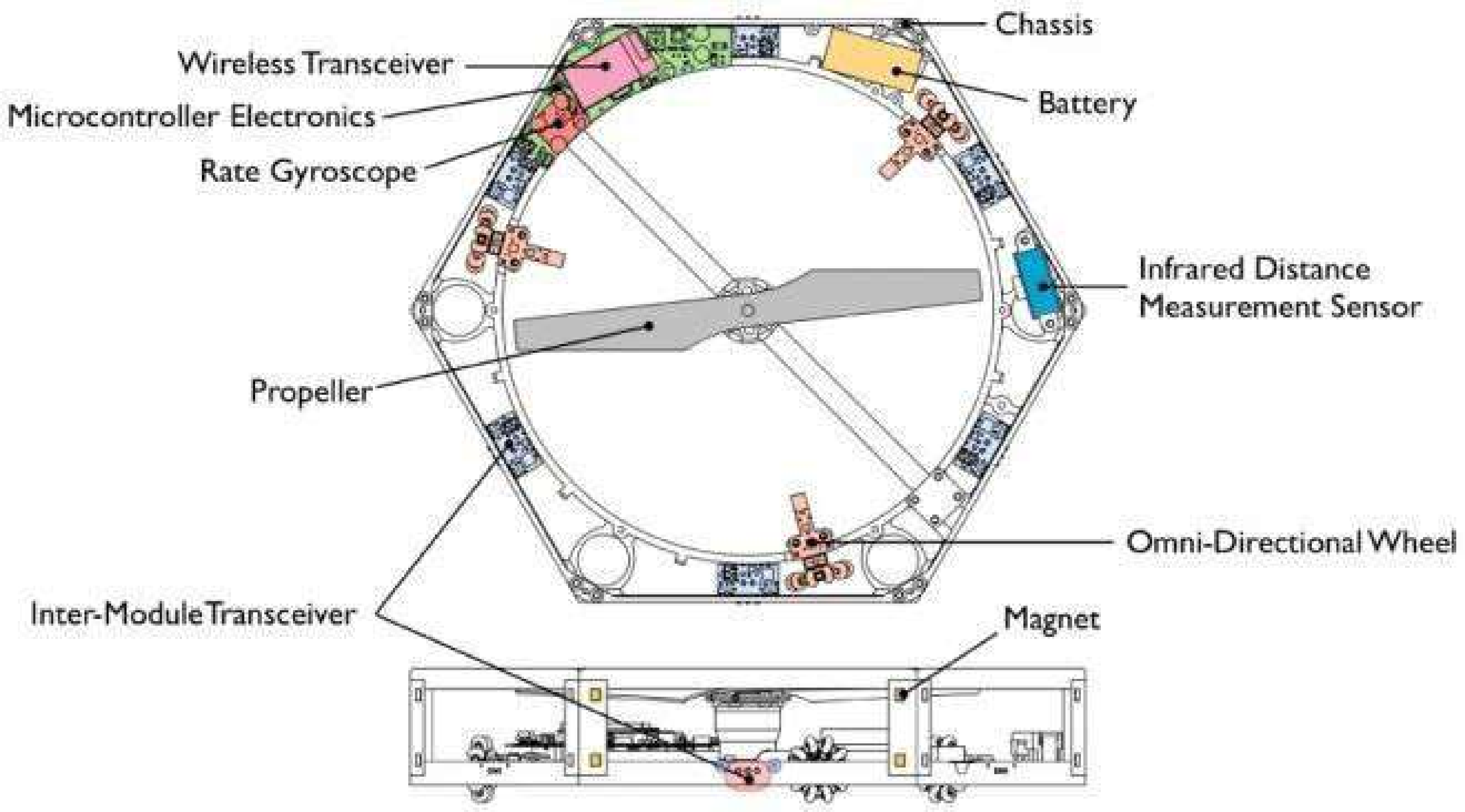

ESC
ESC
ESC
ESC
Connector
For Power
Module


I4
X4
I6
X6
IY6
Y6
I8
V8
X8

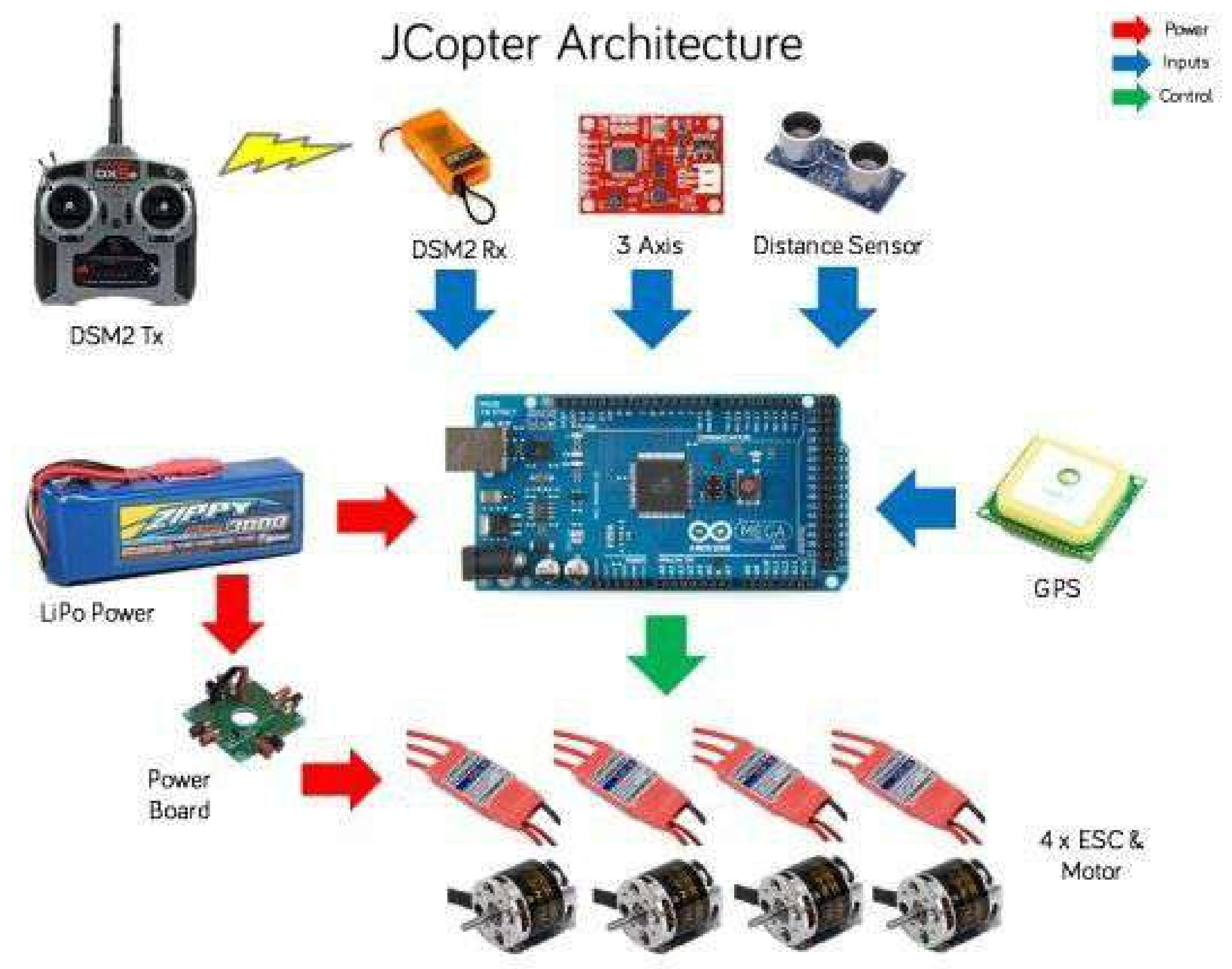

M2
M1
M3
M4

Micro minimosd wiring connection diagram





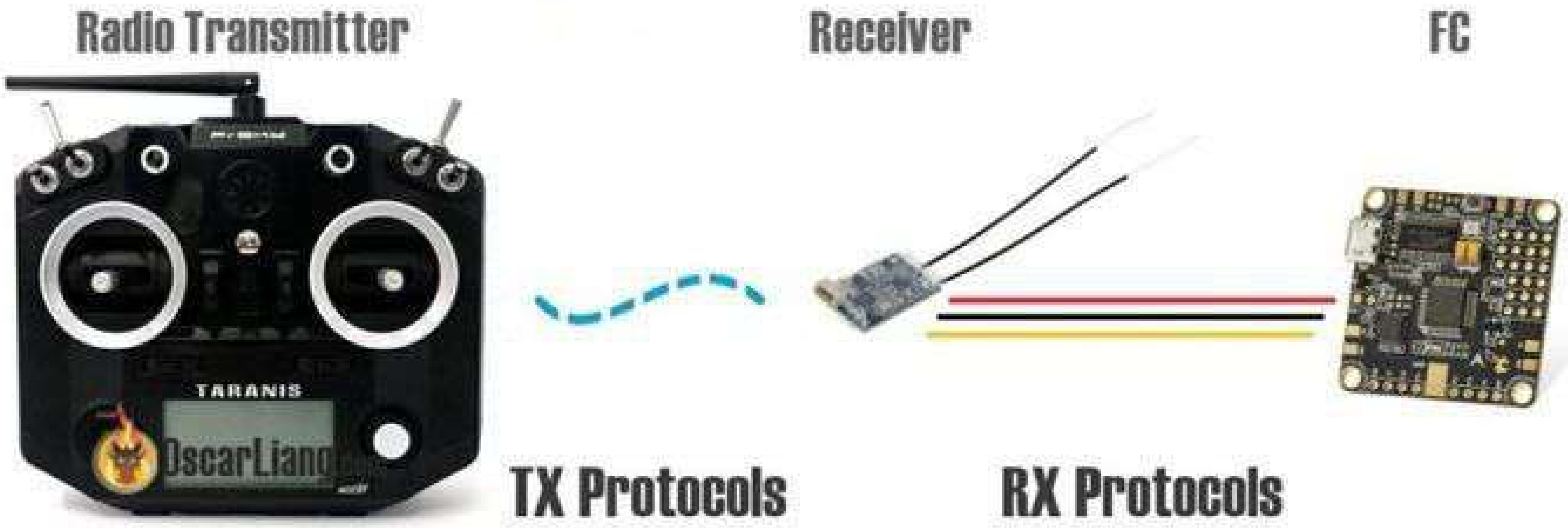
Chassis
Wireless Transceiver
Battery
Microcontroller Electronics
Rate Gyroscope
Infrared Distance
Measurement Sensor
Propeller
Omni-Directional Wheel
Inter-Module Transceiver
Magnet


JCopter Architecture
Power
Inputs
Control
DSM2 Tx
DSM2 Rx
3 Axis
Distance Sensor
LiPo Power
GPS
Power Board
4 x ESC & Motor

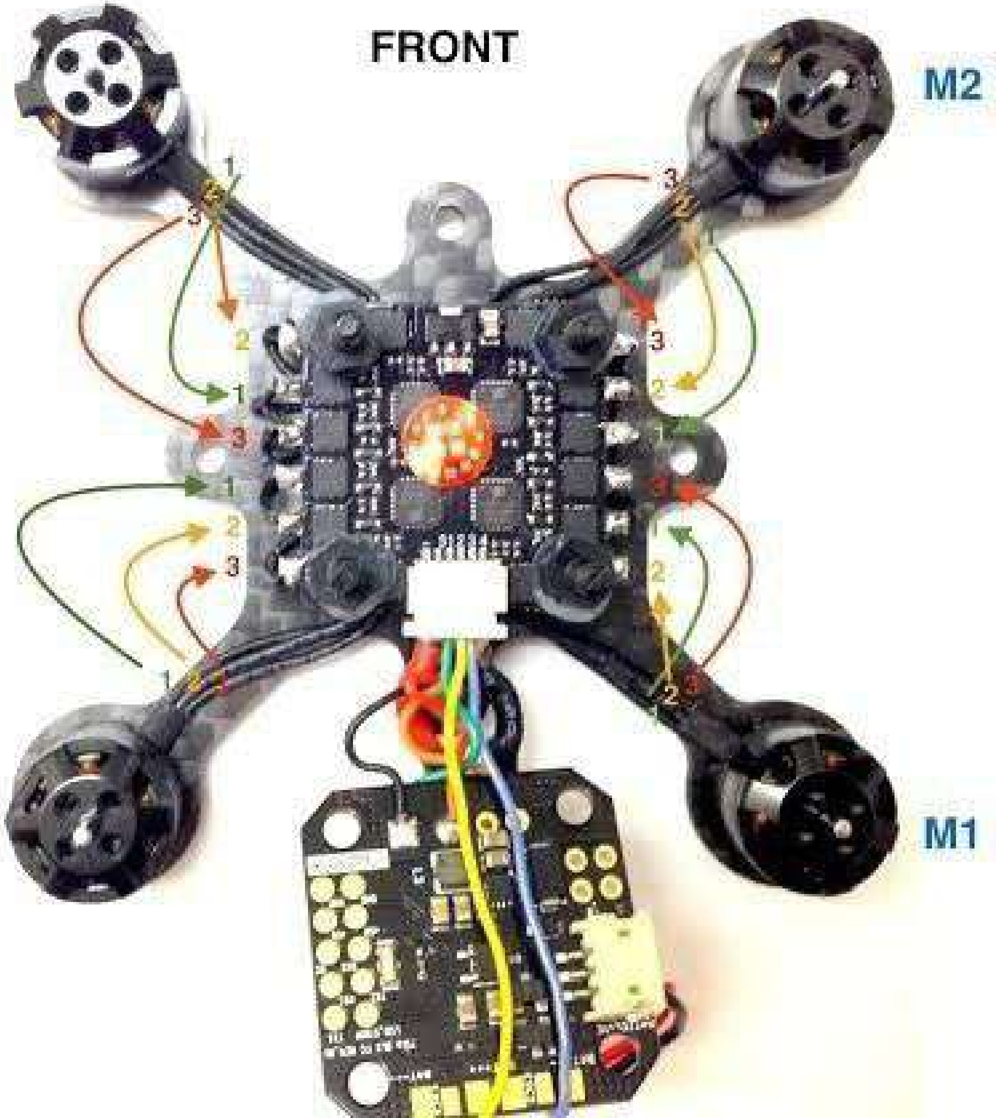
5. 8G
32CH
TS832
FR
CH
5 4 3 2 1
5 4 3 2 1
Pin 2 is no use, so we removed that wire.
Black wire close to the edge (Pin 1),
yellow wire on Pin 3
= No Use
Video
Ground
Video
In
12V
Input
00:01
HERO3
Camera
11.1V 2200mAh
35C
storm
11.1V power supply, from a battery or
share same power supply from the aircraft

Mode 3
Elevator
Aileron
Throttle
Rudder

Mode 4
Throttle
Aileron
Elevator
Rudder


Radio Transmitter
Receiver
FC
TARANIS
OscarLiang
TX Protocols
RX Protocols

Motors to ESC wiring diagram



Motor wires length should be ~45mm they go under ESC around standoff

Mini Quad RX 2.4GHz Standard
900MHz Long Range
X4R-SB
SBUS 16CH / CPPM 8CH
30 x 22 x 11mm
5.8g
FRSKY XSR
SBUS 16CH / CPPM 8CH
25 x 19 x 11mm
3.8g
FRSKY R-XSR
SBUS 16CH / CPPM 8CH
16 x 11 x 5mm
1.5g
FRSKY XM+
SBUS 16CH
21.5 x 12 x 3.5mm
1.6g
FRSKY XM
SBUS 16CH
15 x 10 x 3.5mm
1g
Super Micro
SBUS 8CH
12 x 10mm
0.45g
Furious LR1000
SBUS 8CH
24.5 x 14 x 4mm
2.2g
BeeCeiver
SBUS 8CH
16 x 11 x 5.4mm
1.1g
Spektrum
FPV Racing
DSMX
26 x 21 x 8mm
3.6g
Futaba
FM800 Pro
SBUS 16CH / CPPM 8CH
30 x 14 x 3mm
3g
Flysky RX2A Pro
iBUS 10CH
15 x 12mm
1g
https://oscarliang.com/frsky-rx-mini-quad/
FRSKY R9
R9M 8-16CH
43 x 27 x 14mm
16g
Crossfire Micro
CRSF 12CH / SBUS 16CH
40 x 14 x 9mm
3.2g
FRSKY R9 Slim
R9M 8-16CH
30 x 13.5 x 5mm
3.2g
Crossfire Nano
CRSF 12CH / SBUS 16CH
18 x 11mm
0.5g
FRSKY R9 Mini
R9M 8-16CH
16 x 10mm
1.1g
28mm
2207 Motor
OscarLiang.com